

Safety Data Sheet
acc. to OSHA HCS

Printing date 01/22/2020

Reviewed on 01/22/2020

1 Identification**- Product identifier**

- **Trade name:** Thread Armor®
- **Synonyms:** VC1293 Anti-Galling Coating
- **Part number:** VC1293
- **Application of the substance / the mixture** Protective coating

- Details of the supplier of the safety data sheet**- Manufacturer/Supplier:**

ND Industries, Inc
1000 North Crooks Road
Clawson, MI 48017
USA
Telephone: +1-248-288-0000
Email: info@ndindustries.com
Website: www.ndindustries.com

- Information department: Product Safety Department**- Emergency telephone number:**

United States: 1-800-424-9300
International: +1-703-527-3887

2 Hazard(s) identification**- Classification of the substance or mixture**

GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor.



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.

Repr. 1B H360 May damage fertility or the unborn child.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2B H320 Causes eye irritation.

- Label elements**- GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).**- Hazard pictograms**

GHS02 GHS07 GHS08

- Signal word Danger**- Hazard-determining components of labeling:**

titanium dioxide
Rheology additive

- Hazard statements

H226 Flammable liquid and vapor.
H315+H320 Causes skin and eye irritation.
H351 Suspected of causing cancer.
H360 May damage fertility or the unborn child.

- Precautionary statements

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.

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P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P264	Wash face, hands and any exposed skin thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P280	Wear protective gloves.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P321	Specific treatment (see on this label).
P362+P364	Take off contaminated clothing and wash it before reuse.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P370+P378	In case of fire: Use for extinction: CO ₂ , powder or water spray.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

- Other hazards**- Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Mixtures

- **Description:** Mixture of the substances listed below with nonhazardous additions.

- Dangerous components:

	Modified Short Oil Skin Irrit. 2, H315; Eye Irrit. 2B, H320	40 – 49%
CAS: 1330-20-7	xylene Flam. Liq. 3, H226; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	20 – 29%
CAS: 13463-67-7	titanium dioxide Carc. 2, H351	5 – 9%
	Polypropylene wax blend Combustible Dust	5 – 9%
CAS: 1332-58-7	Kaolin	1 – 4%
	Rheology additive Repr. 1B, H360; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335; Flam. Liq. 4, H227	≤ 1%
	Surfactant Repr. 2, H361	≤ 1%

4 First-aid measures

- Description of first aid measures**- General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

Supply fresh air; consult doctor in case of complaints.

- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

- **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- **After swallowing:** If symptoms persist consult doctor.

- Information for doctor:

- **Most important symptoms and effects, both acute and delayed** No further relevant information available.

- **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Fire-fighting measures

- Extinguishing media

- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.

- **For safety reasons unsuitable extinguishing agents:** Water with full jet

- **Special hazards arising from the substance or mixture** No further relevant information available.

- Advice for firefighters**- Protective equipment:**

Mouth respiratory protective device.

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Wear self-contained respiratory protective device.
Wear fully protective suit.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Wear protective clothing.

- Environmental precautions: Do not allow to enter sewers/ surface or ground water.

- Methods and material for containment and cleaning up:

Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
Dispose of the collected material according to regulations.

- Reference to other sections

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- Handling:

- Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.

- Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.

- Conditions for safe storage, including any incompatibilities

- Storage:

- Requirements to be met by storerooms and receptacles: No special requirements.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep receptacle tightly sealed.

- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.

- Control parameters

- Components with limit values that require monitoring at the workplace:

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

CAS: 1330-20-7 xylene

PEL	Long-term value: 435 mg/m ³ , 100 ppm
REL	Short-term value: 655 mg/m ³ , 150 ppm Long-term value: 435 mg/m ³ , 100 ppm
TLV	Short-term value: 651 mg/m ³ , 150 ppm Long-term value: 434 mg/m ³ , 100 ppm BEI

CAS: 1332-58-7 Kaolin

PEL	Long-term value: 15* 5** mg/m ³ *total dust **respirable fraction
REL	Long-term value: 10* 5** mg/m ³ *total dust **respirable fraction
TLV	Long-term value: 2* mg/m ³ E; as respirable fraction

- Ingredients with biological limit values:

CAS: 1330-20-7 xylene

BEI	1.5 g/g creatinine Medium: urine Time: end of shift Parameter: Methylhippuric acids
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- Additional information: The lists that were valid during the creation were used as basis.

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- Exposure controls**- Personal protective equipment:****- General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Avoid contact with the eyes and skin.

- Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Nitrile rubber, NBR

- Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- Eye protection:

Tightly sealed goggles

- Body protection: Protective work clothing

9 Physical and chemical properties

- Information on basic physical and chemical properties**- General Information****- Appearance:**

- **Form:** Liquid
- **Color:** Green
- **Odor:** Solvent-like
- **Odor threshold:** Not determined.

- **pH-value:** Not determined.

- Change in condition

- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** $\geq 137 - \leq 143$ °C ($\geq 278.6 - \leq 289.4$ °F)

- **Flash point:** 30 °C (86 °F)

- **Flammability (solid, gaseous):** Not applicable.

- **Ignition temperature:** 325 °C (617 °F)

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

- Explosion limits:

- **Lower:** 1.1 Vol %
- **Upper:** 7 Vol %

- **Vapor pressure at 20 °C (68 °F):** ≤ 29 hPa (≤ 21.8 mm Hg)

- **Density at 20 °C (68 °F):** ~ 1.32992 g/cm³ (~ 11.09818 lbs/gal)

- **Relative density** Not determined.

- **Vapor density** Not determined.

- **Evaporation rate** Not determined.

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- Solubility in / Miscibility with	
- Water:	Not miscible or difficult to mix.
- Partition coefficient (n-octanol/water): Not determined.	
- Viscosity:	
- Dynamic:	Not determined.
- Kinematic at 40 °C (104 °F):	500 mm ² /s
- Solvent content:	
- Organic solvents:	25.1 %
- Water:	0.8 %
- VOC content:	25.10 % ~ 333.8 g/l / ~ 2.79 lb/gal
- Solids content:	24.2 %
- Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
 - **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
 - **Acute toxicity:**

- LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimate)

Oral	LD50	18,503 mg/kg (rat)
Dermal	LD50	8,606 mg/kg (rabbit)
Inhalative	LC50/4 h	> 30.6 mg/l

CAS: 1330-20-7 xylene

Oral	LD50	4,300 mg/kg (rat)
Dermal	LD50	2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	11 mg/l (ATE)

CAS: 13463-67-7 titanium dioxide

Oral	LD50	> 20,000 mg/kg (rat)
Dermal	LD50	> 10,000 mg/kg (rabbit)
Inhalative	LC50/4 h	> 6.82 mg/l (rat)

Rheology additive

Oral	LD50	5,000 mg/kg (rat)
Dermal	LD50	2,000 mg/kg (rat)

Surfactant

Oral	LD50	> 10,000 mg/kg (rat)
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- **Primary irritant effect:**
 - **on the skin:** Irritant to skin and mucous membranes.
 - **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.

- Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful
Irritant

- Carcinogenic categories

- IARC (International Agency for Research on Cancer)

CAS: 1330-20-7	xylene	3
CAS: 9002-84-0	Polytetrafluoroethylene	3

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CAS: 13463-67-7	titanium dioxide	2B
CAS: 67-63-0	isopropanol	3
CAS: 112926-00-8	Precipitated silica (Silica-Amorphous)	3

- NTP (National Toxicology Program)

None of the ingredients is listed.

- OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- Toxicity

- **Aquatic toxicity:** No further relevant information available.

- **Persistence and degradability:** No further relevant information available.

- Behavior in environmental systems:

- **Bioaccumulative potential:** No further relevant information available.

- **Mobility in soil:** No further relevant information available.

- Additional ecological information:

- General notes:

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

- Results of PBT and vPvB assessment

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **Other adverse effects:** No further relevant information available.

13 Disposal considerations

- Waste treatment methods

- **Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- Uncleaned packagings:

- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- UN-Number	
- DOT, IMDG, IATA	UN1139
- UN proper shipping name	
- DOT	Coating solution
- IMDG, IATA	COATING SOLUTION
- Transport hazard class(es)	
- DOT	
	
- Class	3 Flammable liquids
- Label	3
- IMDG, IATA	
	
- Class	3 Flammable liquids
- Label	3
- Packing group	
- DOT, IMDG, IATA	III
- Environmental hazards:	
- Marine pollutant:	No
- Special precautions for user	Warning: Flammable liquids
- Hazard identification number (Kemler code):	30

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- EMS Number:	F-E,S-E
- Stowage Category	A
- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
- Transport/Additional information:	
- DOT	
- Quantity limitations	On passenger aircraft/rail: 60 L On cargo aircraft only: 220 L
- IMDG	
- Limited quantities (LQ)	5L
- Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
- UN "Model Regulation":	UN 1139 COATING SOLUTION, 3, III

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture

- Sara

- Section 355 (extremely hazardous substances):

None of the ingredients is listed.

- Section 313 (Specific toxic chemical listings):

CAS: 1330-20-7 | xylene

CAS: 67-63-0 | isopropanol

- TSCA (Toxic Substances Control Act):

Modified Short Oil	ACTIVE
xylene	ACTIVE
Polytetrafluoroethylene	ACTIVE
titanium dioxide	ACTIVE
Modified melamine resin	ACTIVE
Polypropylene wax blend	*
Kaolin	ACTIVE
isopropanol	ACTIVE
Rheology additive	ACTIVE
Surfactant	ACTIVE
Surfactant	ACTIVE
2-methoxy-1-methylethyl acetate	ACTIVE
Anti-foaming compound	ACTIVE
Silicon dioxide, amorphous	ACTIVE
propan-1-ol	ACTIVE
Colorant	ACTIVE
Alumina Trihydrate	ACTIVE
Solvent naphtha (petroleum), medium aliph.	ACTIVE
Distillates (petroleum), hydrotreated light	ACTIVE
Poly(ethylene glycol) (12) tridecyl ether	ACTIVE
Deionized water	ACTIVE

- Hazardous Air Pollutants

CAS: 1330-20-7 | xylene

- Proposition 65

- Chemicals known to cause cancer:

None of the ingredients is listed.

- Chemicals known to cause reproductive toxicity for females:

Rheology additive

- Chemicals known to cause reproductive toxicity for males:

Rheology additive

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- Chemicals known to cause developmental toxicity:		
Rheology additive		
- Carcinogenic categories		
- EPA (Environmental Protection Agency)		
CAS: 1330-20-7	xylene	
- TLV (Threshold Limit Value established by ACGIH)		
CAS: 1330-20-7	xylene	A4
CAS: 13463-67-7	titanium dioxide	A4
CAS: 1332-58-7	Kaolin	A4
CAS: 67-63-0	isopropanol	A4
CAS: 71-23-8	propan-1-ol	A4
- NIOSH-Ca (National Institute for Occupational Safety and Health)		
CAS: 13463-67-7	titanium dioxide	
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.		

*16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** ND Industries, Inc. - Safety, Health and Environmental Affaires
- **Contact:** Safety, Health and Environmental Affaires
- **Classification System:**

- HMIS-ratings (scale 0 - 4)

HEALTH	1	Health = *1
FIRE	3	Fire = 3
REACTIVITY	0	Reactivity = 0

- NFPA ratings (scale 0 - 4)

1	3	0	Health = 1
			Fire = 3
			Reactivity = 0

- Date of preparation / last revision 01/22/2020 / 26

- Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 ACGIH: American Conference of Governmental Industrial Hygienists
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 VOC: Volatile Organic Compounds (USA, EU)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 NIOSH: National Institute for Occupational Safety
 OSHA: Occupational Safety & Health
 TLV: Threshold Limit Value
 PEL: Permissible Exposure Limit
 REL: Recommended Exposure Limit
 BEI: Biological Exposure Limit
 Flam. Liq. 3: Flammable liquids – Category 3
 Flam. Liq. 4: Flammable liquids – Category 4
 Acute Tox. 4: Acute toxicity – Category 4
 Skin Irrit. 2: Skin corrosion/irritation – Category 2
 Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
 Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B
 Carc. 2: Carcinogenicity – Category 2
 Repr. 1B: Reproductive toxicity – Category 1B
 Repr. 2: Reproductive toxicity – Category 2
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

- * Data compared to the previous version altered.

- Disclaimer

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